## **SIEMENS**

Data sheet 5SY6303-7



Miniature circuit breaker 400 V 6kA, 3-pole, C, 3 A, D=70 mm

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	3
design of pole	3P
tripping characteristic class	С
mechanical service life (switching cycles) / typical	10 000
overvoltage category	III
degree of pollution	3
Voltage	
type of voltage / of the operating voltage	AC
insulation voltage (Ui)	
<ul><li>with single-phase operation / at AC / rated value</li></ul>	440 V
with multi-phase operation / at AC / rated value	440 V
supply voltage / with single-phase operation / at AC / rated value	230 V
Supply voltage	
supply voltage	
at AC / rated value	400 V
operating voltage / at DC / rated value / maximum	72 V
Protection class	
protection class IP	IP20, with connected conductors
Switching capacity	
switching capacity current	
<ul><li>at DC / acc. to IEC 60947-2 / rated value</li></ul>	15 kA
<ul><li>acc. to EN 60898 / rated value</li></ul>	6 kA
• acc. to IEC 60947-2 / rated value	30 kA
energy limitation class	3
Dissipation	
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	1.3 W
Current	
operational current	
<ul> <li>at 35 °C / rated value</li> </ul>	3 A
<ul> <li>at 45 °C / rated value</li> </ul>	2.78 A
<ul> <li>at 50 °C / rated value</li> </ul>	2.71 A
<ul> <li>at 55 °C / rated value</li> </ul>	2.62 A
at AC / rated value	3 A

Product dotails product component / neutral conductor switching product feature / fouch protection product component • combined terminal top • combined terminal top • combined terminal top • combined terminal top • product feature • properties for main switches in accordance with EN 60024-1 • halogen-free • cealable • cealable • cealable • sealable • sealable • policon-free • product extension / installable / supplementary devices  Short citrati  breaking capacity short-circuit current (for) • all AC / acc. to U. 1077 and CSA C22.2 No 235  Connectable conductor cross-section / stranded • ininimum • naximum  connectable conductor cross-section / stranded • ininimum • naximum  Connectable conductor cross-section / finely stranded / with core end processing • ininimum • maximum  Registering torque (bit in) / with screw-type terminals • ininimum • maximum  Strainimum • maximum • maxi	suitability for operation	Mechanical engineering / industry
product component / neutral conductor switching product feature / souch protection / Yes product component   e. combined terminal top   Yes   Yes		
product feature / fouch protection product component		No
product component		
combined terminal bottom     conditional terminal bottom     product feature     * properties for main switches in accordance with EN     60020-1     * nalogen-free     * seliction-free     * s	·	100
combined terminal bottom     product feature		Ves
product feature  properties for main switches in accordance with EN 60024-1  intogen-free  properties of main switches in accordance with EN 60024-1  intogen-free  product extension / installable / supplementary devices  Short circuit  breaking capacity short-circuit current (ton)  at AC acc. to UL 1077 and CSA C22.2 No.235  Connectable conductor cross-section / solid  minimum  maximum  connectable conductor cross-section / stranded  minimum  maximum  connectable conductor cross-section / finely stranded / with core end processing  minimum  maximum  maximum  AWG number / as coded connectable conductor cross-section / finely stranded / with core end processing  minimum  maximum  tightening forque [fi-fin] / with screw-type terminals  minimum  maximum  tightening forque [fi-fin] / with screw-type terminals  minimum  maximum  maximum  connectable conductor cross-section / finely stranded / with core end processing  minimum  maximum  25 mm²  25 mm²  20 fine  18  maximum  22 lb fine  maximum  23 b fine  minimum  maximum  24  tightening forque [fi-fin] / with screw-type terminals  minimum  maximum  maximum  25 N m  maximum  25 N m  maximum  26 mm  Machanical Design  Machanical Design  Midth  Gepth  76 mm  form  mounting position  met weight  minimum  and tight survey and tight screw  minimum  and tight survey  minimum  and tight surve		
e properties for main switches in accordance with EN 80204-1  • halogen-free • sealable • yes • sealable • sealable • yes • sealable • yes • sealable • yes		165
60204-1	·	Voc
esalable yes islicon-free yes product extension / installable / supplementary devices Yes    Short cricit    braking appacity short-circuit current (Icro)    at A.C./ acc. to UL 1077 and CSA C22.2 No.236    shift in minimum   0.75 mm²    maximum   35 mm²    connectable conductor cross-section / standed    minimum   35 mm²    connectable conductor cross-section / stranded    minimum   0.75 mm²    maximum   35 mm²    connectable conductor cross-section / finely stranded /  minimum   0.75 mm²    maximum   18    maximum   18    maximum   18    minimum   22 lbf-in    maximum   25 h·m    position / of power supply cord   Arry    Mochanical Doslgn    meleight   90 mm    mixillation depth   70 mm    number of modular width units   3    fastening method   Quick assembly system    mounting position   arry    maximum   489 g    minimum   25 ° C    minimum   6 ° C ° C    minimum   75 ° C    mumber of rest cycles / for environmental testing / acc. to [6 6	• •	165
esalable yes islicon-free yes product extension / installable / supplementary devices Yes    Short cricit    braking appacity short-circuit current (Icro)    at A.C./ acc. to UL 1077 and CSA C22.2 No.236    shift in minimum   0.75 mm²    maximum   35 mm²    connectable conductor cross-section / standed    minimum   35 mm²    connectable conductor cross-section / stranded    minimum   0.75 mm²    maximum   35 mm²    connectable conductor cross-section / finely stranded /  minimum   0.75 mm²    maximum   18    maximum   18    maximum   18    minimum   22 lbf-in    maximum   25 h·m    position / of power supply cord   Arry    Mochanical Doslgn    meleight   90 mm    mixillation depth   70 mm    number of modular width units   3    fastening method   Quick assembly system    mounting position   arry    maximum   489 g    minimum   25 ° C    minimum   6 ° C ° C    minimum   75 ° C    mumber of rest cycles / for environmental testing / acc. to [6 6	<ul><li>halogen-free</li></ul>	Yes
product extension / installable / supplementary devices Short direction  breaking capacity short-clicuit current (for)  • at AC / acc. to UL 1077 and CSA C22 2 No 235  Connectable  • minimum  • maximum  connectable conductor cross-section / solid  • minimum  • maximum  connectable conductor cross-section / stranded  • minimum  • maximum  connectable conductor cross-section / stranded /  • minimum  • maximum  connectable conductor cross-section / finely stranded /  • minimum  • maximum  AWG number / as coded connectable conductor cross-section  • minimum  • maximum  AWG number / as coded connectable conductor cross-section  • minimum  • maximum  • maximum  18  • minimum  • maximum  19  tightening torque (libt-in) / with screw-type terminals  • minimum  • maximum  • maximum  position / of power supply cord  Mechanical besign  Mechanical besign  Mechanical besign  method  mounting position  number of modular width units  3 astening method  Moultand position  mounting position  net weight  Environmental conditions  influence of the surrounding temperature  widthat net conditions  influence of the surrounding temperature  widthat net conditions  influence of the surrounding temperature  widthat net surrounding temperature  widthat net conditions  influence of the surrounding temperature  widthation resistance / acc. to IEC 60088-2-6  ambient temperature / during operation  • minimum  • maximum  • maxi	_	Yes
Short circuit  breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235  Connectable conductor cross-section / solid • minimum • maximum • m	• silicon-free	Yes
breaking capacity short-circuit current (Icn)	product extension / installable / supplementary devices	Yes
e at AC / acc. to UL 1077 and CSA C22.2 No 235  Connectable conductor cross-section / solid e minimum	Short circuit	
e at AC / acc. to UL 1077 and CSA C22.2 No 235  Connectable conductor cross-section / solid e minimum	breaking capacity short-circuit current (Icn)	
connectable conductor cross-section / solid  minimum maximum 0.75 mm² 35 mm² 0.75 mm² 36 mm² 0.75 mm		5 kA
connectable conductor cross-section / solid  minimum maximum 0.75 mm² 35 mm² 0.75 mm² 36 mm² 0.75 mm	Connections	
minimum maximum maximimum maximim maximimum maximimim maximimim maximimim maximimim maximimim maximim maximim maximim maximimim maximim		
e maximum connectable conductor cross-section / stranded e minimum e maximum 35 mm²  connectable conductor cross-section / finely stranded / with core end processing e minimum e maximum  AWG number / as coded connectable conductor cross section e minimum e maximum  18  4 tightening torque (libf in) / with screw-type terminals e minimum e maximum 31 libf in tightening torque / with screw-type terminals e minimum e maximum 3.5 N·m position / of power supply cord Any Mechanical Design height you mumber of modular width units astening method mounting position net weight Influence of the surrounding temperature vibration resistance / acc. to IEC 60068-2-6 ambient temperature / during operation e minimum e maximum e max 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C vibration resistance / acc. to IEC 60068-2-6 ambient temperature / during operation e minimum e maximum e maximum e maximum e max 95% to 55°C ambient temperature / during operation e minimum e minimum e max 95% to 55°C ambient temperature / during operation e minimum e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max minimum e max 95% to 55°C ambient temperature / during operation e minimum e max minimum e max 95% to 55°C ambient temperature / during storage e minimum e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum e max 95% to 55°C ambient temperature / during storage e minimum 66 e 66		0.75 mm²
connectable conductor cross-section / stranded		
minimum maximum maximum maximum maximum maximum minimum maximum maxim		
maximum     connectable conductor cross-section / finely stranded / with core end processing		0.75 mm²
connectable conductor cross-section / finely stranded / with core end processing		
with core end processing		00 111111
■ maximum     AWG number / as coded connectable conductor cross section     ■ minimum     ■ maximum     4  tightening torque [libf-in] / with screw-type terminals     ● minimum     ● maximum     31 libf-in  tightening torque / with screw-type terminals     ● minimum     ● maximum     18     4  tightening torque / with screw-type terminals     ● minimum     ■ maximum     ● maximum     ■ standard substance     ● minimum     ■ standard substance     ● minimum     ■ standard substance		
AWG number / as coded connectable conductor cross section  • minimum • maximum  18 • maximum 22 lbf-in • maximum 31 lbf-in  tightening torque [lbf-in] / with screw-type terminals • minimum • maximum 31 lbf-in  tightening torque / with screw-type terminals • minimum • maximum 9 as 5 N-m  position / of power supply cord Any  Mechanical Design  height 90 mm width 54 mm depth 76 mm installation depth 70 mm number of modular width units 3 fastening method mounting position any net weight 2Neight 489 g  Environmental conditions  influence of the surrounding temperature vibration resistance / acc. to IEC 60068-2-6 ambient temperature / during operation • minimum • maximum • for C • maximum • for C • maximum • maximum • maximum • for C • maximum • maximum • maximum • for C • maximum • maximum • maximum • for C • for environmental testing / acc. to IEC 60068-2-30	• minimum	0.75 mm <sup>2</sup>
section  • minimum  • maximum  4  tightening torque [lbf-in] / with screw-type terminals  • minimum  • maximum  • maximum  13 lbf-in  tightening torque / with screw-type terminals  • minimum  • maximum  • maximum  • maximum  • maximum  position / of power supply cord  Any  Mechanical Design  height  90 mm  width  54 mm  depth  76 mm  installation depth  70 mm  number of modular width units  3  fastening method  mounting position  any  net weight  Environmental conditions  influence of the surrounding temperature  • minimum  • maximum  number of test cycles / for environmental testing / acc. to IEC 60068-2-30	• maximum	25 mm²
<ul> <li>minimum</li> <li>maximum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>mumber of test cycles / for environmental testing / acc. to IEC 60068-2-30</li> </ul>		
maximum     itightening torque [lbf-in] / with screw-type terminals         iminimum		
tightening torque [lbf-in] / with screw-type terminals		
<ul> <li>minimum</li> <li>maximum</li> <li>1 lbf-in</li> <li>tightening torque / with screw-type terminals</li> <li>minimum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>3.5 N·m</li> <li>position / of power supply cord</li> <li>Any</li> <li>Mechanical Design</li> <li>height</li> <li>go mm</li> <li>width</li> <li>depth</li> <li>76 mm</li> <li>installation depth</li> <li>number of modular width units</li> <li>fastening method</li> <li>quick assembly system</li> <li>mounting position</li> <li>net weight</li> <li>489 g</li> <li>Environmental conditions</li> <li>influence of the surrounding temperature</li> <li>wibration resistance / acc. to IEC 60068-2-6</li> <li>±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz</li> <li>ambient temperature / during operation</li> <li>minimum</li> <li>minimum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>minimum</li> <li>maximum</li> <li>minimum</li> <li>minimum</li></ul>		4
maximum     tightening torque / with screw-type terminals         • minimum		
tightening torque / with screw-type terminals		
<ul> <li>minimum</li> <li>maximum</li> <li>maximum</li> <li>3.5 N·m</li> <li>position / of power supply cord</li> <li>Any</li> </ul> Mechanical Design height <ul> <li>90 mm</li> <li>width</li> <li>54 mm</li> <li>depth</li> <li>76 mm</li> <li>installation depth</li> <li>no mm</li> <li>number of modular width units</li> <li>fastening method</li> <li>quick assembly system</li> <li>mounting position</li> <li>any</li> <li>net weight</li> <li>489 g</li> </ul> Environmental conditions <ul> <li>influence of the surrounding temperature</li> <li>wibration resistance / acc. to IEC 60068-2-6</li> <li>±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz</li> </ul> ambient temperature / during operation <ul> <li>minimum</li> <li>-25 °C</li> </ul> ambient temperature / during storage <ul> <li>minimum</li> <li>maximum</li> <li>40 °C</li> </ul> maximum <ul> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>maximum</li> <li>for environmental testing / acc. to IEC 60068-2-30</li> </ul>		31 lbf·in
● maximum position / of power supply cord Any  Mechanical Design height width 4eight 90 mm installation depth 76 mm installation depth 70 mm number of modular width units fastening method mounting position any net weight  Environmental conditions influence of the surrounding temperature wibration resistance / acc. to IEC 60068-2-6  ■ maximum ■ maximum  -25 °C  maximum  -40 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30		0.5.11
position / of power supply cord  Mechanical Design  height  90 mm  width  54 mm  depth  76 mm  installation depth  70 mm  number of modular width units  fastening method  mounting position  net weight  Environmental conditions  influence of the surrounding temperature  wibration resistance / acc. to IEC 60068-2-6  ambient temperature / during operation  • minimum  • maximum  menature / during storage  • minimum  • maximum  • maximum  number of test cycles / for environmental testing / acc. to IEC 60068-2-30  Any  max 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz  arc. to IEC 60068-2-6  arc. to IEC 60068-2-30		
height 90 mm width 54 mm depth 76 mm installation depth 70 mm number of modular width units 3 fastening method Quick assembly system mounting position any net weight 489 g  Environmental conditions influence of the surrounding temperature max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C vibration resistance / acc. to IEC 60068-2-6 ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz ambient temperature / during operation • minimum -25 °C sminimum -40 °C maximum -40 °C number of test cycles / for environmental testing / acc. to IEC 60068-2-30		
height 90 mm  width 54 mm  depth 76 mm  installation depth 70 mm  number of modular width units 3  fastening method Quick assembly system  mounting position any net weight 489 g  Environmental conditions  influence of the surrounding temperature max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  vibration resistance / acc. to IEC 60068-2-6 ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz  ambient temperature / during operation  • minimum -25°C  ambient temperature / during storage  • minimum -40°C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30		Any
width 54 mm  depth 76 mm  installation depth 70 mm  number of modular width units 3  fastening method Quick assembly system  mounting position any net weight 489 g  Environmental conditions  influence of the surrounding temperature max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  vibration resistance / acc. to IEC 60068-2-6 ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz  ambient temperature / during operation  • minimum -25 °C  ambient temperature / during storage  • minimum -40 °C  maximum -75 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30		
depth 76 mm installation depth 70 mm number of modular width units 3 fastening method Quick assembly system mounting position any net weight 489 g  Environmental conditions influence of the surrounding temperature max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C vibration resistance / acc. to IEC 60068-2-6 ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz ambient temperature / during operation • minimum -25°C • maximum 55°C ambient temperature / during storage • minimum -40°C • maximum -75°C number of test cycles / for environmental testing / acc. to IEC 60068-2-30		
installation depth number of modular width units fastening method Quick assembly system mounting position net weight  Environmental conditions influence of the surrounding temperature wibration resistance / acc. to IEC 60068-2-6 ambient temperature / during operation  • minimum • minim		
number of modular width units  fastening method  Quick assembly system  mounting position  net weight  Environmental conditions  influence of the surrounding temperature  vibration resistance / acc. to IEC 60068-2-6  ambient temperature / during operation  • minimum  • maximum  ambient temperature / during storage  • minimum  • maximum  To c  -40 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30	•	
fastening method  mounting position  net weight  Environmental conditions  influence of the surrounding temperature  vibration resistance / acc. to IEC 60068-2-6  ambient temperature / during operation  maximum  maximum  maximum  maximum  ambient temperature / during storage  maximum  maxim		
mounting position net weight  Environmental conditions  influence of the surrounding temperature  max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  vibration resistance / acc. to IEC 60068-2-6  which is a maximum  max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  ### the maximum at 5 to 25Hz; 50m/s² at 25 to 150Hz  ### at 5 to 25Hz; 50m/s² at 25 to 150Hz		
net weight  Environmental conditions  influence of the surrounding temperature  wibration resistance / acc. to IEC 60068-2-6  influence of the surrounding temperature  wax. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  influence of the surrounding temperature  influence of the s		Quick assembly system
influence of the surrounding temperature  max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  vibration resistance / acc. to IEC 60068-2-6  ambient temperature / during operation  influence of the surrounding temperature  ### ### ### ### ### ### ### ### ### #		·
influence of the surrounding temperature  vibration resistance / acc. to IEC 60068-2-6  ambient temperature / during operation  • minimum  • max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C  ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz  -25 °C  ambient temperature / during storage  • minimum  -40 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30		489 g
vibration resistance / acc. to IEC 60068-2-6  ambient temperature / during operation  • minimum  • maximum  55 °C  ambient temperature / during storage  • minimum  • maximum  -40 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30  *#1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz  *#25 °C  **25 °C  **26 °C  **27 °C  **36 °C		
ambient temperature / during operation  • minimum  • maximum  55 °C  ambient temperature / during storage  • minimum  • maximum  • maximum  75 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30		
<ul> <li>minimum</li> <li>maximum</li> <li>maximum</li> <li>55 °C</li> </ul> ambient temperature / during storage <ul> <li>minimum</li> <li>maximum</li> <li>maximum</li> <li>75 °C</li> </ul> number of test cycles / for environmental testing / acc. to IEC 60068-2-30 <ul> <li>IEC 60068-2-30</li> </ul>		±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz
<ul> <li>maximum</li> <li>55 °C</li> <li>ambient temperature / during storage</li> <li>minimum</li> <li>maximum</li> <li>75 °C</li> <li>number of test cycles / for environmental testing / acc. to IEC 60068-2-30</li> <li>6</li> </ul>	ambient temperature / during operation	
ambient temperature / during storage	• minimum	
<ul> <li>minimum</li> <li>maximum</li> <li>75 °C</li> <li>number of test cycles / for environmental testing / acc. to IEC 60068-2-30</li> <li>6</li> </ul>		55 °C
● maximum 75 °C  number of test cycles / for environmental testing / acc. to IEC 60068-2-30 6	ambient temperature / during storage	
number of test cycles / for environmental testing / acc. to IEC 60068-2-30	• minimum	
IEC 60068-2-30		75 °C
Certificates		6
	Certificates	

reference code

• acc. to DIN EN 61346-2

• acc. to IEC 81346-2

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## **General Product Approval**









**Miscellaneous** 

<u>KC</u>

General Product Approval

EMC

Declaration of Conformity

**Test Certificates** 

Marine / Shipping







Miscellaneous





Marine / Shipping

other







**Miscellaneous** 

## **Further information**

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SY6303-7}$ 

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/5SY6303-7

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SY6303-7

**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** 

http://www.siemens.com/specifications





